

CLAIMS

1. A system for determining optimal resources based upon client location and resource locations, said system comprising:
  - a. one or more databases containing client location data and resource location data;
  - b. a cluster detector retrieving client location data from one or more databases to determine one or more client locations and creating one or more client clusters, each of said client clusters having one or more weights associated with them;
  - c. a cluster rater receiving said one or more client clusters and outputting one or more weighted clusters;
  - d. a locator determining one or more resources and retrieving resource location data from said one or more databases;
  - e. an optimizer computing at least one optimized resource based upon said weighted clusters and said resource location data, and
  - f. a scheduler dynamically scheduling said at least one optimized resource.
2. A system for determining optimal resources based upon client location and resource locations, as per claim 1, wherein said optimizer further calculates a center of mass associated with each of said weighted clusters and utilizes said calculated center of mass in said computation of at least one optimized resource.
3. A system for determining optimal resources based upon client location and resource locations, as per claim 2, wherein said center of mass calculation is done using:

$$\vec{V}_{cm} = \left( \frac{\sum_{i=1}^N w_i x_i}{N \sum_{i=1}^N w_i}, \frac{\sum_{i=1}^N w_i y_i}{N \sum_{i=1}^N w_i}, \frac{\sum_{i=1}^N w_i z_i}{N \sum_{i=1}^N w_i} \right),$$

where  $w$  is the weight associated with each client in a client cluster,  $N$  is the total number of clients in said client cluster, and  $x$ ,  $y$ , and  $z$  are coordinate locations associated with each client in said client cluster.

4. A system for determining optimal resources based upon client location and resource locations, as per claim 1, wherein said system further comprises a center of mass calculation engine, said engine calculating a center of mass associated with each of said weighted clusters and passing said calculated center of mass to said optimizer for computing said at least one optimized resource.

5. A system for determining optimal resources based upon client location and resource locations, as per claim 4, wherein said center of mass calculation is done using:

$$\vec{V}_{cm} = \left( \frac{\sum_{i=1}^N w_i x_i}{N \sum_{i=1}^N w_i}, \frac{\sum_{i=1}^N w_i y_i}{N \sum_{i=1}^N w_i}, \frac{\sum_{i=1}^N w_i z_i}{N \sum_{i=1}^N w_i} \right),$$

where  $w$  is the weight associated with each client in a client cluster,  $N$  is the total number of clients in said client cluster, and  $x$ ,  $y$ , and  $z$  are coordinate locations associated with each client in said client cluster.

- 1 6. A system for determining optimal resources based upon client location and resource  
2 locations, as per claim 1, wherein said weights associated with said clients are equal  
3 in value.
- 1 7. A system for determining optimal resources based upon client location and resource  
2 locations, as per claim 1, wherein said resources are any of the following: meeting  
3 location, airfare, flight availability, or airline.
- 1 8. A system for determining optimal resources based upon client location and resource  
2 locations, as per claim 1, wherein said system further comprises a filter manager  
3 passing said one or more clusters through one or more filters, said filters modifying at  
4 least one weight associated with each of said client clusters.
- 1 9. A system for determining optimal resources based upon client location and resource  
2 locations, as per claim 1, wherein said retrieved client location data is a set of  
3 coordinate data, said coordinate data comprising longitude, latitude, and altitude  
4 information.
- 1 10. A system for determining optimal resources based upon client location and resource  
2 locations, as per claim 1, wherein said one or more databases comprises a plurality of  
3 the following databases: a location database containing records of locations, a client  
4 database containing records regarding said one or more clients, an event database

5 containing information regarding events associated with one or more clients, or a  
6 resource database containing records of said one or more resources.

1 11. A system for determining optimal resources based upon client location and resource  
2 locations, as per claim 10, wherein said system further includes a positioning interface  
3 receiving, from one or more remote electronic devices associated with one or more  
4 clients, client location information and saving said client location information onto  
5 said location database.

1 12. A system for determining optimal resources based upon client location and resource  
2 locations, as per claim 1, wherein said system further comprises a notification  
3 manager updating said one or more databases and notifying one or more clients  
4 regarding said scheduled at least one resource.

1 13. A system for determining optimal resources based upon client location and resource  
2 locations, as per claim 12, wherein said notification is done via an electronic mail  
3 message.

1 14. A method for optimizing resources and dynamically scheduling said resources, said  
2 method comprising the steps of:  
3 a. identifying location coordinates associated with one or more participants, each of  
4 said participants associated with a rating;

- 5 b. detecting one or more location clusters from said identified location coordinates,  
6 based on proximity of said participants;  
7 c. creating a rated cluster from each of said location clusters, based on said ratings  
8 associated with participants within each of said location clusters;  
9 d. calculating a center of mass associated with each of said rated clusters;  
10 e. identifying available resources and retrieving resource location data from one or  
11 more databases;  
12 f. optimizing at least one resource based on said identified resource and said  
13 calculated center of mass, and  
14 g. dynamically scheduling said optimized at least one resource.
- 1 15. A method for optimizing resources and dynamically scheduling said resources, as per  
2 claim 14, wherein said method further comprises the step of filtering said location  
3 clusters to modify said ratings.
- 1 16. A method for optimizing resources and dynamically scheduling said resources, as per  
2 claim 14, wherein said center of mass calculation is done using:

$$\vec{V}_{cm} = \left( \frac{\sum_{i=1}^N w_i x_i}{N \sum_{i=1}^N w_i}, \frac{\sum_{i=1}^N w_i y_i}{N \sum_{i=1}^N w_i}, \frac{\sum_{i=1}^N w_i z_i}{N \sum_{i=1}^N w_i} \right),$$

4       where  $w$  is the weight associated with each client in a client cluster,  $N$  is the total  
5       number of clients in said client cluster, and  $x$ ,  $y$ , and  $z$  are coordinate locations  
6       associated with each client in said client cluster.

1       17.   A method for optimizing resources and dynamically scheduling said resources, as per  
2       claim 16, wherein said weights associated with said clients are equal in value.

1       18.   A method for optimizing resources and dynamically scheduling said resources, as per  
2       claim 14, wherein said method further comprises notifying said one or more  
3       participants regarding said optimized at least one resource.

1       19.   A method for optimizing resources and dynamically scheduling said resources, as per  
2       claim 14, wherein said resources are any of the following: meeting location, airfare,  
3       flight availability, or airline.

1       20.   A method for optimizing resources and dynamically scheduling said resources, as per  
2       claim 14, wherein said notification is done via an email message.

1       21.   An article of manufacture comprising a computer usable medium having computer  
2       readable program code embodied therein which optimizes resources and dynamically  
3       scheduling said optimized resources, said medium further comprising:

- 4       a.   computer readable program code identifying location coordinates associated with  
5       one or more participants, each of said participants associated with a rating;

- b. computer readable program code detecting one or more location clusters from said identified location coordinates, based on proximity of said participants;
- c. computer readable program code creating a rated cluster from each of said location clusters, based on said ratings associated with participants within each of said location clusters;
- d. computer readable program code identifying available resources and retrieving resource location data from one or more databases;
- e. computer readable program code optimizing at least one resource based on said identified resource and said rated clusters, and
- f. computer readable program code dynamically scheduling said optimized at least one resource.

22. An article of manufacture comprising a computer usable medium having computer readable program code embodied therein which optimizes resources and dynamically scheduling said optimized resources, as per claim 21, said medium further comprising computer readable program code filtering said location clusters to modify said ratings.

23. An article of manufacture comprising a computer usable medium having computer readable program code embodied therein which optimizes resources and dynamically scheduling said optimized resources, as per claim 21, wherein said resources are any of the following: meeting location, airfare, flight availability, or airline.